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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/652,144 | 08/29/2003 | Kenneth W. Boyd | TUC920030079US1 | 1176 |
| 49080 | 7590 | 04/03/2008 | | |
| DALE F. REGELMAN CHANDLER & UDALL, LLP 4801 E. BROADWAY BLVD #400 TUCSON, AZ 85711-3609 | | | EXAMINER SWEARINGEN, JEFFREY R | |
| | | | ART UNIT 2145 | PAPER NUMBER |
| | | | NOTIFICATION DATE 04/03/2008 | DELIVERY MODE ELECTRONIC |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/652,144

Applicant(s)

BOYD ET AL.

Examiner

Jeffrey R. Swearingen

Art Unit

2145

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 10-15 and 19-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5, 10, 11, 14, 19, 20 and 23 is/are rejected.
- 7) ☒ Claim(s) 3, 4, 6, 12, 13, 15, 21, 22 and 24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This case has been reassigned to a new examiner.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/20/07 has been entered.

Response to Arguments

3. Applicant's arguments with respect to claims 1-6, 10-15, and 19-24 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

4. Claims 3, 4, 6, 12, 13, 15, 21, 22, and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Specification

5. The disclosure is objected to because of the following informalities: Claim 19 is directed toward a computer program product embodied in a computer readable medium. There is insufficient antecedent basis in the specification for the term computer readable medium.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2145

7. Claims 1-2, 5, 10-11, 14, 19-20, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shaw (US 6,751,673) in view of Shah et al. (US 6,446,121).

8. In regard to claims 1, 10, and 19, Shaw disclosed a content distribution network (*supplying a plurality of host computers, wherein a different one of said plurality of control nodes is disposed in each of said plurality of host computers, and wherein each host computer comprises a storage management program to manage the transfer of data to data storage and retrieval systems; supplying a plurality of data storage and retrieval systems, wherein each data storage and retrieval system comprises a plurality of host adapters, a plurality of data storage devices, a processor, and a data cache; supplying a communication link interconnecting each of said plurality of host computers and each of said data storage and retrieval systems*). Shaw, Figure 1. Shaw makes a determination of which server should be the "leader". (*providing by each of said plurality of control nodes a first signal to each of the other control nodes; receiving by each of said plurality of control nodes, a response signal from each of the other control nodes; calculating by each of said plurality of control nodes individual response times for each of the other control nodes; determining an aggregate response time for each of the plurality of interconnected control nodes; determining whether to select a captain control node using said aggregate response times*). Shaw, column 8, lines 30-55 describes the "Leader Algorithm."

9. Shaw failed to explicitly disclose that the master/leader/"captain" node is selected based on the minimum aggregate response time. Shah selected which mirroring server would be most appropriate for a user based on the round trip time (*minimum aggregate response time*) for the specific user. Shah, column 6, lines 1-7, lines 26-34. Shah deals with mirroring servers, which is analogous to the distributed content network in that both can select multiple points to download the appropriate data since it is present or "mirrored" on multiple servers.

10. It would have been obvious to one of ordinary skill in the art at the time of invention to combine the content distribution network of Shaw with the shortest path server selection teachings of Shah in order to decrease latency. (Shah, column 1, lines 56-65, column 2, lines 5-21).

11. In regard to claims 2, 11, and 20, Shaw further disclosed *determining if two or more control nodes each have said minimum aggregate response time; if two or more control nodes each have said minimum*

Art Unit: 2145

aggregate response time, repeating the steps of claim 1, 10, 19. See the Leader Algorithm of Shaw, column 8, lines 30-55.

12. In regard to claims 5, 14, and 23, Shah further disclosed *operative if the captain control node is not selected using said aggregate response times, providing a captain control node selection function; determining a performance score for each of the plurality of control nodes using said captain control node selection function; designating a control node having a minimum performance score as the captain control node.* Shah, column 6, lines 1-7, lines 26-34 selected a server based on the shortest round trip time.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Mankude et al.

US 6,748,437

Rodriguez, Pablo et al. "Dynamic Parallel Access to Replicated Content in the Internet."

IEEE/ACM Transactions on Networking. Vol. 10, No. 4. August 2002. 455-65. IEEE.

Krishnamurthy, Balachander et al. "On the Use and Performance of Content Distribution Networks." Proceedings of the 1st ACM SIGCOMM Workshop on Internet Measurement. November 2001. ACM. 169-82.

Cranor, C.D. et al. "Design and Implementation of a Distributed Content Management System." Proceedings of the 13th international workshop on Network and Operating Systems Support for Digital Audio and Video. ACM. June 2003. 4-11.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey R. Swearingen whose telephone number is (571)272-3921. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on 571-272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2145

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jeffrey R. Swearingen
Examiner
Art Unit 2145

/J. R. S./
Examiner, Art Unit 2145

/Jason D Cardone/
Supervisory Patent Examiner, Art Unit 2145